M 4.3, 6 km W of Arcadia, Oklahoma
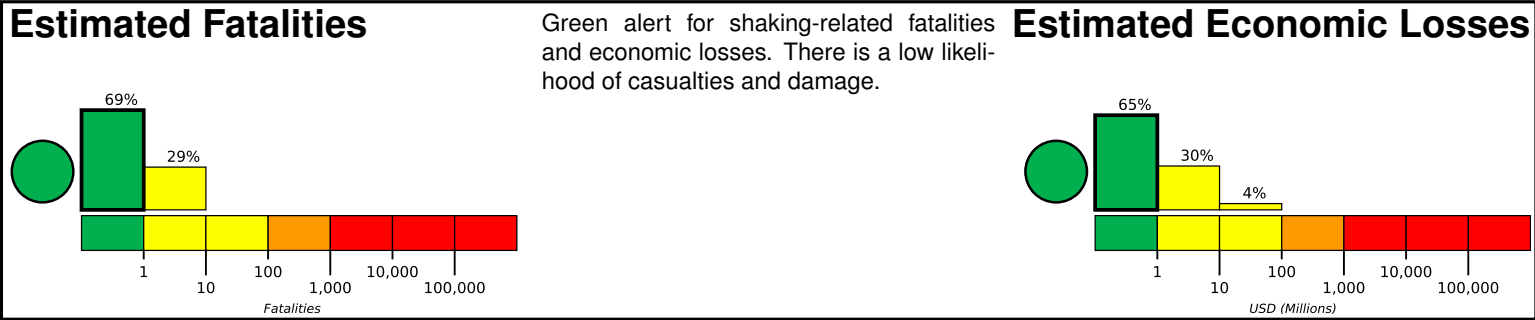
Origin Time: 2024-01-13 03:46:27 UTC (Fri 21:46:27 local)
Location: 35.6694° N 97.3892° W Depth: 3.0 km

Created: 2 hours, 9 minutes after earthquake

Estimated Fatalities
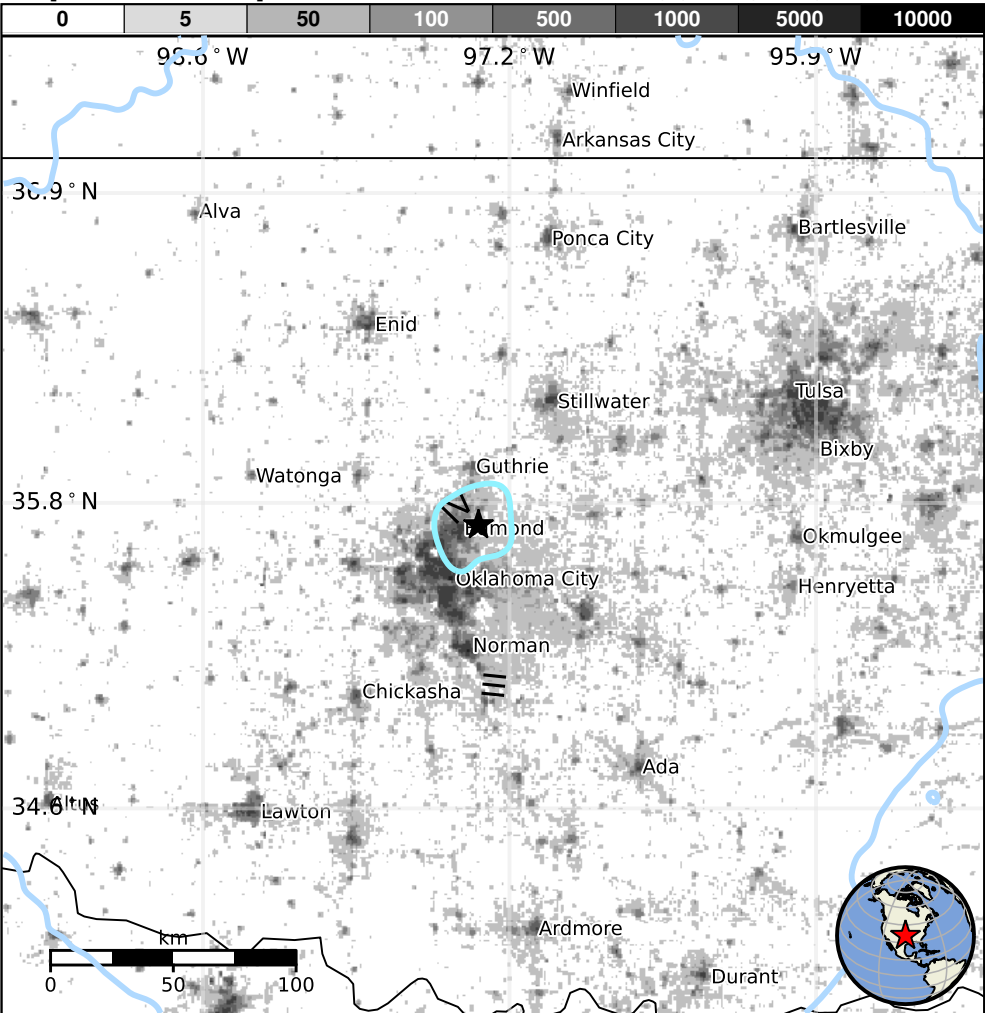

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

69%
29%

1   10   100   1,000   10,000   100,000

Fatalities

Estimated Economic Losses

65%
30%
4%

1   10   100   1,000   10,000   100,000

USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	3,683k	314k	17k	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

0	5	50	100	500	1000	5000	10000

Structures

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are unreinforced brick masonry and reinforced masonry construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1974-02-15	310	4.6	IV(8k)	–
1997-09-06	141	4.5	V(3k)	–

Selected City Exposure

from GeoNames.org

MMI	City	Population
IV	**Edmond**	**81k**
IV	Nichols Hills	4k
IV	The Village	9k
IV	**Stillwater**	**46k**
IV	Jones	3k
III	Spencer	4k
III	**Oklahoma City**	**580k**
III	**Norman**	**111k**
III	Broken Arrow	99k
III	Wichita Falls	105k
II	**Tulsa**	**392k**

bold cities appear on map.   (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage.
Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/ok2024awfn#pager

Event ID: ok2024awfn